



UniSec

Quick selection guide

Air-insulated medium voltage switchgear for secondary distribution up to 24 kV, 1250 A, 25 KA

UniSec offers the following features:

- Air insulation of all live parts
- SF6 switch-disconnector
- Removable and withdrawable vacuum and SF6 circuit-breakers
- Multi-function apparatus with integrated vacuum circuit-breaker and gas-insulated disconnector
- Withdrawable vacuum contactor
- LSC2A service continuity classification
- Withdrawable circuit-breaker and contactor class LSC2B service continuity classification
- Complete range of functional units and accessories
- Large selection of state-of-the-art protection relays, integrated on removable circuit-breakers or separately mounted for protection, control and measurement functions.

Reference Standards

The switchgear and the main equipment it contains comply with the following standards:

- IEC 62271-1 for the general application
- IEC/EN 62271-200 for the switchgear. With reference to the classifications established by the standards, UniSec

switchgear is defined as described below:

- continuity of service classification: LSC2A and LSC2B
- classification of the segregations: PM (metallic partition) and PI (insulation partition) for withdrawable circuit-breakers at 24 kV only
- IEC 62271-102 for the earthing switch
- IEC 62271-100 for the circuit-breakers
- IEC 60071-2 for insulation co-ordination
- IEC 60470 for the contactors
- IEC 60265-1 for the switch disconnectors
- IEC 60529 for the protection classes
- IEEE 693 Seismic qualification testing of the switchgear.

Fields of application

- Medium voltage secondary power distribution
- Transformer substations
- Control and protection of feeders and power transformers – Infrastructures, data centers, Small Power Generation
- Airports
- Hospitals and shopping centres
- Industries, renewable energy systems
- Marine.

Switchgear electrical characteristics

Rated voltage	kV	12	17.5	24
Test voltage (50-60 Hz x 1 min)	kV	28	38	50
Impulse withstand voltage	kV	75	95	125
Rated frequency	Hz	50-60	50-60	50-60
Rated main busbar current	A	630/800/1250	630/800/1250	630/1250
Rated current of apparatus:				
– VD4/R-Sec - HD4/R-Sec removable circuit-breaker – GSec gas switch-disconnector	A	630/800 630/800	630/800 630/800	630 630
– Vmax/Sec withdrawable circuit-breaker	A	630/1250	630/1250	–
– VD4/Sec withdrawable circuit-breaker	A	–	–	630/1250
– VSC/P withdrawable vacuum contactor	A	400	–	–
Rated short time withstand current		16/20 ⁽⁴⁾ / 25 ⁽¹⁾⁽²⁾	16/20 ⁽⁴⁾ / 25 ⁽²⁾	16/20 ⁽⁴⁾
Peak current		40/52.5/63	40/52.5/63	40/52.5
Internal arc withstand current (IAC AFLR) (3)		12.5/16/21/25 (2)	12.5/16/21/25 (2)	12.5/16/21

• 25 kA 2s for units "no withdrawable circuit-breaker" • For withdrawable circuit-breaker • Contact us for 21 kA/52.5kAp
 • On request "No internal arc" • For HySec 16 kA(1s)/40kAp



UNISEC SELECTION GUIDE

	SDC	SDS	SDM	SDD	UMP	SFC	SFS	SBC	SBS		
Width [mm]	Unit with switch-disconnector	Unit with switch-disconnector - isolation	Isolating unit with measurement with switch-disconnector	Unit with double switch-disconnector	Universal Metering Unit	Switch-disconnector with fuses	Switch-disconnector with fuses - isolation	Circuit-breaker with switch-disconnector	Circuit-breaker with switch-disconnector - isolation		
375	9 1	3 7 3 1				3 1	3 3 7 1				
500	1 2 3	1 3 5				3 1 2 3	3 3 7 1 3				
600											
750	1 2 9 1 2		1 2 3 3	9	1 2			1 2 4 9	1 3 4 3		
190								1 2 3	1 2		
	SBM	SBR	HBC	SFV	DRC	DRS	RLC	RRC	WBC	WBS	BME
Width [mm]	Isolating unit with measurement, circuit-breaker and double switch-disconnector	Reversed circuit-breaker unit	Unit with integrated circuit-breaker and switch-disconnector	Disconnector unit with fuses - measurement	Direct incoming unit with measurement and busbar earthing	Riser unit - measurement	Lateral cable riser, right (only for SBR unit)	Lateral cable riser, left (only for SBR unit)	Unit with withdrawable circuit-breaker LSC2B-PM/PI	Unit with withdrawable circuit-breaker LSC2B-PM/PI - isolation	Busbar measuring and earthing unit
375					9	7 3					
500			1 2 9 1	2 1 2 3	1 2 7 3 4 9 3	1 5 7 3					
600									1 2 4 9 10	1 3 4 7 3	2 3 4 9
750	1 2	1 3 4 3							1 2 4 9	1 3 4 7 3	
190							•	•			
<p>¹⁾ VTs not available in case of CTs (only for panel H = 1700 mm)</p> <p>²⁾ Only for 12-17.5 kV</p> <p>³⁾ Coupled only on the left side of WBC/WBS/BME panels</p>			<p>1 Current transformers (CT)</p> <p>2 Voltage transformers (VT)</p> <p>3 Busbar earthing</p> <p>4 Separate lower earthing switch</p> <p>5 Voltage transformers with left busbar exit only (only for panel H = 1700 mm)</p> <p>6 Separate lower earthing switch without making capacity</p>			<p>7 Direction of lower busbar exit, left</p> <p>3 Direction of lower busbar exit, right</p> <p>9 Surge arrestors</p> <p>10 Contactor</p> <p>11 Top cable entry for panels H = 2000 mm</p> <p>12 VT's on busbars for panels H = 2000 mm</p> <p>13 Adaptor panel for LSC2A and LSC2B panels</p>					

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